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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/336,636	06/18/1999	KAZUTOMO HASEGAWA	FUJA-16.217	7893
26304	7590	11/10/2005	EXAMINER	
KATTEN MUCHIN ROSENMAN LLP			KUMAR, PANKAJ	
575 MADISON AVENUE			ART UNIT	
NEW YORK, NY 10022-2585			PAPER NUMBER	
			2631	

DATE MAILED: 11/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/336,636

Applicant(s)

HASEGAWA ET AL.

Examiner

Pankaj Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18,20-32,35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 35 is/are rejected.
- 7) ☒ Claim(s) 1-18,20-32 and 36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Response to Amendment***

#### ***Claim Objections***

2. Claim 23 objected to because of the following informalities: There appears to be a typo since it refers back to itself. It should probably be dependent on claim 22. Appropriate correction is required.
3. Claims 1, 17, 18, 20, 31, 32, 35 along with their dependent claims are objected since DMT should be defined within the claims when it is used for the first time in each independent claim.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Polcyn in view of Long and Gatherer. Here is how the references teach the claim:

6. As per claim 35: means for generating a sliding window (Polcyn col. 1 line 67-68: sliding window with measurements) based on a timing signal (not in Polcyn but would be obvious as explained below) representing a periodical noise duration (Polcyn: data has periods of voice and periods of noise (col. 13 lines 33-35, col. 11 lines 23-24, col. 11 lines 15-18, fig. 3; col. 13 lines 30-67: evaluating 3 consecutive buffers and measuring attributes to see if all have voice or if some have noise; the buffers are the sliding window and the length of the buffers indicate the duration of the buffer and hence the noise duration when noise is inside the buffers)); means for discriminating (Polcyn col. 14 lines 1-7: two types of noise indicators), based on a status of said sliding window (Polcyn col. 13 line 59: peak/average indicators, col. 13 lines 30-67 especially lines 33-35: evaluating 3 consecutive buffers to see if all have voice or if some have noise), which kinds of durations of said periodical noise duration (Polcyn col. 14 lines 4-7: two kinds of noise durations where one is if the peak/average is not at the proper level, where average is inherently over a duration, and the second is if two consecutive buffers do not have voice) a transmitting (Polcyn col. 3 line 10) DMT (Polcyn teaches multitone (Polcyn col. 13 line 61) but not discrete multitone modulation but it would be obvious as explained below) symbol belongs to (Polcyn is determining the type of noise the data belongs to for example using the two kinds of noise indicators col. 14 lines 4-7); means for performing an initial training of a receiver equalizer (Gatherer fig. 3: 19, 21, 22) according to said status of sliding window (Gatherer fig. 3: channel data; channel 18 is the sliding window since it is a window of a time period of data and data slides through it; fig. 1; channel 18 is of length h) (Gatherer col. 7 lines 30-40).
7. Polcyn does not teach TCM-ISDN timing signal and DMT. Long 5991311 teaches TCM-ISDN timing signal (Long col. 11 line 3: TCM timing of ISDN lines, lines 11-12: timing

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extractor in fig. 12 is functionally a modified TCM ISDN modem, col. 11 lines 55-56: TCM ISDN timing) and Gatherer 5461640 teaches DMT (Gatherer col. 1 line 38). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at the TCM-ISDN timing signal and DMT as indicated by the instant claims, because the combined teaching of Polcyn with Long and Gatherer suggest sliding window with TCM-ISDN timing signal and DMT as indicated by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of Polcyn with Long and Gatherer because Polcyn suggests data transmission (Polcyn col. 3 line 10) (something broad) in general and Long and Gatherer suggests the beneficial use of having multiplexing and modulation during data transmission (TCM-ISDN time compression multiplexing ISDN, DMT discrete multitone modulation) such as reducing crosstalk by multiplexing (Long col. 2 lines 29-31), synchronizing with the TCM-ISDN to reduce crosstalk (Long: title, col. 6 line 59 to col. 7 line 32) in order to transmit data, and using an already chosen standard, DMT modulation for ADSL communication (Gatherer col. 1 lines 34-45, col. 2 lines 1-2) to simplify communication devices being compatible with each other when communicating which involves transmitting in the analogous art of data transmission.

***Allowable Subject Matter***

8. Claims 1-18, 20-32, 36 are objected to but would be allowed is rewritten to overcome the objections presented in the claim objection section of this action. See a prior action for details on reason for allowance.

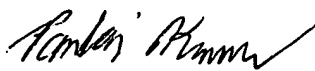
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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pankaj Kumar whose telephone number is (571) 272-3011. The examiner can normally be reached on Mon, Tues, Thurs and Fri after 8AM to after 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Pankaj Kumar  
Patent Examiner  
Art Unit 2631

PK